

## Auckland Regional Public Health Service

Rātonga Hauora ā Iwi o Tamaki Makaurau



Working with the people of Auckland, Waitemata and Counties Manukau

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### Submission on *Transport for future urban growth*

Thank you for the opportunity for Auckland Regional Public Health Service (ARPHS) to provide a submission on the *Transport for future urban growth* consultation document.

The following submission represents the views of the Auckland Regional Public Health Service and does not necessarily reflect the views of the three District Health Boards it serves. Please refer to Appendix 1 for more information on ARPHS.

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Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Jane McEntee'.

Jane McEntee  
General Manager  
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A handwritten signature in blue ink, appearing to read 'Michael Hale'.

Dr. Michael Hale  
Medical Officer of Health  
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## Introduction

1. Thank you for the opportunity to submit on the Transport for future urban growth (in Southern, Northern and Northwest Auckland) consultation document.
2. We support the intent of the document to ensure that transportation planning occurs in a coordinated way, and that public transport, walking and cycling infrastructure are strongly featured in the draft consultation document.
3. Auckland Regional Public Health Service (ARPHS) has an interest in public and active transport as a means of increasing the health of the population through regular incidental exercise. This is important as Auckland has a high prevalence of chronic diseases associated with sedentary lifestyles such as obesity and diabetes. These diseases place a large burden on society, through significant healthcare costs and loss of productivity.

## Overall comments

### ***Prioritising public transport and active transportation***

4. Our overall recommendation is for walking, cycling and public transportation to be prioritised ahead of private vehicle based transportation. These forms of transport support to improve health outcomes, as well as other social and environmental outcomes. We would like to see removal of barriers to the uptake of public and active transportation. These barriers include risk of cyclist and pedestrian injury, and time and cost of using these modes of transport.
5. We support the phased reduction of vehicle dependency in the Auckland region and we have further detailed health issues associated with private vehicle usage in Appendix 2 of this document. Active transport (walking and cycling) in providing regular physical activity can have an impact in reducing rates of obesity<sup>1</sup>.
6. We support Auckland Transport's strategic aim to 'Prioritise rapid, high frequency public transport to achieve the Auckland Plan outcome of moving to outstanding public transport'<sup>2</sup>. We also support the intent to 'invest to reduce reliance on private vehicles', 'increase investment in walking and cycling initiatives' and 'provide infrastructure in suitable locations to support uptake of public transport'<sup>3</sup>.

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<sup>1</sup> Wagner, A., Simon, C., Ducimetiere, P., Montaye, M., Bongard, V., Yarnell, J., & Arveiler, D. (2001). Leisure-time physical activity and regular walking or cycling to work are associated with adiposity and 5 y weight gain in middle-aged men: the PRIME Study. *International Journal of Obesity & Related Metabolic Disorders*, 25(7).

<sup>2</sup> <https://at.govt.nz/media/1191335/Regional-Land-Transport-Plan-Adopted-Version-July-2015.pdf>

<sup>3</sup> Page 24. Retrieved from URL: <https://at.govt.nz/media/1191335/Regional-Land-Transport-Plan-Adopted-Version-July-2015.pdf>

7. While we note and appreciate the inclusion of public and active transport oriented projects in the consultation documents, it appears that the transport solutions in the draft are predominantly new roading projects. We would like to see the current emphasis on roading and private vehicle based transport shifted in favour of public and active transport. ARPHS recommends that new roads should not be built at the expense of public and active transportation, and that this should form a key part of each transport plan.

### ***Other benefits of promoting physical activity through urban form***

8. It is suggested urban forms that promote physical activity through walkability increase the attractiveness of local urban economies for business investment. A 2014 study<sup>4</sup> of the walkability of urban areas in the United States found that the most walkable metropolitan urban areas have an average of 38% higher gross domestic product (GDP) per capita as compared to the least walkable metropolitan urban areas in the study. Research from the United Kingdom (UK) reveals there is recognition of the economic benefits of investing in cycling and walking, but is often still undervalued by public policy decision making.<sup>5</sup>
9. Some research has found that cycle infrastructure, such as bicycle parking, supports small business revenue in town centres<sup>6</sup>. A NZTA report found that active transportation users (walkers and cyclists) spend more in local businesses than car users, and are important to the economic viability of local shopping areas.<sup>7</sup>
10. Promoting physical activity in our urban environments strengthens the social cohesion of the population.<sup>8</sup> A safe urban form connects individuals, especially disadvantaged groups including people with a disability and immigrants to the resources they need to further their wellbeing.<sup>9</sup>

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<sup>4</sup> Leinberger, C., Lynch, P. (2014). 'Foot traffic ahead: Ranking walkable urbanism in America's largest metros. The George Washington School of Business. Accessed from:

<http://www.smartgrowthamerica.org/documents/foot-traffic-ahead.pdf>

<sup>5</sup> Davis, Dr Adrian for the Department of Health/Government Office for the South West. Value for Money: An Economic Assessment of Investment in Walking and Cycling. 2010. Retrieved from URL: <http://www.apho.org.uk/resource/item.aspx?RID=91553>

<sup>6</sup> <http://ottawa.ca/cs/groups/content/@webottawa/documents/pdf/mdaw/mdyx/~edisp/con056212.pdf>

<sup>7</sup> <http://www.nzta.govt.nz/resources/research/reports/530/docs/RR-530-Reallocation-of-road-space.pdf>

<sup>8</sup> Page 28. Retrieved from URL: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0009/98424/E89498.pdf](http://www.euro.who.int/_data/assets/pdf_file/0009/98424/E89498.pdf)

<sup>9</sup> Public Health Advisory Committee. (2010). Healthy Places, Healthy Lives: Urban environments and wellbeing. Wellington: Ministry of Health.

## **Area specific comments**

### ***The Southern Area***

11. We support the intent to optimise the current network, and recommend that this is strengthened, particularly around the rail network in Southern Auckland.
12. We particularly support the intent to extend the electric rail network throughout the Southern region. We support the planning underway to extend the electric rail network to Pukekohe, and beyond, as demand increases.
13. We note that the *Future Urban Land Supply Strategy*<sup>10</sup> also highlights the importance of strengthening this rail network, and building other transportation links from this network.
14. We note that the *Future Urban Land Supply Strategy* also highlights the potential flooding risks of this area. As climate change progresses and sea levels rise, we would like to highlight the importance of ensuring that key transportation routes are suitably designed, in order to ensure future resilience.

### ***The Northern Area***

15. We note that the northern area has previously been considered as a rural area, and that the proposed growth in this area will place significant demands on transportation. We note that this area is predominantly car dependent, and we support the public and active transportation goals in the plan.
16. These include furthering existing transportation projects such as:
  - Extending the highly successful Northern busway.
  - Upgrading the Hibiscus Coast busway and increasing the frequency of express services.
17. We support the public and active transport based aspirations of the plan, and note that developing a significant public and active transportation network will be a significant part of a successful transportation network in this area.
18. We support the investigation of the future transportation options proposed such as light rail, park and rides, new walking and cycling paths and new public transportation routes.

### ***The Northwest Area***

19. We note that significant growth is proposed in the northwest area. This area is currently predominantly private vehicle dependent, and faces congestion and significant transportation challenges.<sup>11, 12</sup>

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<sup>10</sup> Auckland Council. (2015). *Future Urban Land Supply Strategy*. page 26.

20. We support the aims and intent of this document, and proposals included to improve public and active transportation. These include the extension of existing transportation projects such as; the priority bus shoulders on the Western Ring Route, new bus stations and a dedicated busway.
21. We also support the future options proposed; extending commuter rail services to Huapai, extending the north-western busway, future proofing for light rail into this area, a Westgate to Albany busway and increased frequencies of ferry services.

## **Conclusion**

22. Thank you for the opportunity to submit on the *Transport for future urban growth* (in Southern Auckland, North Auckland and Northwest Auckland) consultation document. We note and support the intent to provide improved public and active transportation options in these areas. We support this intent, and ask for this to be furthered due to the significant potential for improvements in public health outcomes from improved public and active transportation options in these areas. We welcome feedback from Auckland Transport on this issue.

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<sup>11</sup> <http://www.newstalkzb.co.nz/news/national/growing-north-west-population-straining-auckland-transport/>

<sup>12</sup> <http://ourauckland.aucklandcouncil.govt.nz/articles/news/2016/03/transport-for-new-north-western-auckland-housing/>

## **Appendix 1 - Auckland Regional Public Health Service**

Auckland Regional Public Health Service (ARPHS) provides public health services for the three district health boards (DHBs) in the Auckland region (Auckland, Counties Manukau and Waitemata District Health Boards).

ARPHS has a statutory obligation under the New Zealand Public Health and Disability Act 2000 to improve, promote and protect the health of people and communities in the Auckland region. The Medical Officer of Health has an enforcement and regulatory role under the Health Act 1956 and other legislative designations to protect the health of the community.

ARPHS' primary role is to improve population health. It actively seeks to influence any initiatives or proposals that may affect population health in the Auckland region to maximise their positive impact and minimise possible negative effects on population health.

The Auckland region faces a number of public health challenges through changing demographics, increasingly diverse communities, increasing incidence of lifestyle-related health conditions such as obesity and type 2 diabetes, infrastructure requirements, the balancing of transport needs, and the reconciliation of urban design and urban intensification issues.

## Appendix 2 – Vehicles and public health

### *Private vehicle transport and its harmful effects on human health*

The harmful nature of vehicle usage is such that cars have been referred to as 'the new tobacco'<sup>13</sup> in some public health literature. Car usage is linked to many harmful health problems<sup>14</sup> within the Auckland region. These include:

- Physical inactivity<sup>15, 16, 17</sup>
- Obesity<sup>18, 19</sup>
- Death and injury from vehicle accidents<sup>20, 21</sup>. In 2012 Auckland had 3535 injuries associated with road traffic accidents, and 40 fatal road crashes. Pedestrians were implicated in 315 of the accidents, pedal cyclists implicated in 201 of the accidents and motorcyclists were implicated in 326 of the accidents<sup>22</sup>.
- Cardio-respiratory disease from air pollution<sup>23</sup>
- Noise pollution (health effects include sleep disruption, hypertension and stress in children<sup>24, 25, 26</sup>).
- Community severance<sup>27, 28</sup>
- Climate change<sup>29</sup>

<sup>13</sup> Douglas, M.J., Watkins, S., J., Gorman, D. R., Higgins, M. (2011). 'Are cars the new tobacco?' *Journal of Public Health*. Volume 33, Issue 2 Pp. 160-169

<sup>14</sup> Douglas, M.J., Watkins, S., J., Gorman, D. R., Higgins, M. (2011). 'Are cars the new tobacco?' *Journal of Public Health*. Volume 33, Issue 2 Pp. 160-169

<sup>15</sup> Edwards P, Tsouros AD. A Healthy City is an Active City: A Physical Activity Planning Guide. Copenhagen: World Health Organization; 2008.

<sup>16</sup> Morris JN. Exercise in the prevention of coronary heart disease: today's best buy in public health. *Med Sci Sports Exerc* 1994;26:807-14. Medline Web of Science

<sup>17</sup> Department of Health. At least five a week. Evidence on the impact of physical activity and its relationship to health. London: DH; 2004. A report from the Chief Medical Officer.

<sup>18</sup> Ezzati M, Bull FC, Armstrong TP, Dixon T, et al. Physical activity. In: Ezzati M, editor. *Comparative Quantification of Health Risks: Global and Regional Burden of Disease Attributable to Selected Major Risk Factors*. Geneva: World Health Organization; 2004. p. 729-

881. <http://www.who.int/bookorders/anglais/detart1.jsp?sesslan=1&codlan=1&codcol=15&codcch=554>

<sup>19</sup> Institute of Medicine (IOM). *Adequacy of Evidence for Physical Activity Guidelines Development: Workshop Summary*. Washington, DC: United States National Academy of Sciences, the National Academies Press; 2007.

<sup>20</sup> World Health Organization (2004). *The Global Burden of Disease: 2004 Update*. Geneva: World Health Organization; 2008.

[http://www.who.int/healthinfo/global\\_burden\\_disease/GBD\\_report\\_2004update\\_full.pdf](http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf)

<sup>21</sup> Peden M, Scurfield R, Sleet D, et al. *World Report on Road Traffic Injury Prevention*. Geneva: World Health Organization; 2004. <http://whqlibdoc.who.int/publications/2004/9241562609.pdf>

<sup>22</sup> Ministry of Transport (2013) *Motor Vehicle Crashes in New Zealand 2012*, available from

<http://www.transport.govt.nz/research/roadcrashstatistics/motorvehiclecrashesinnewzealand/motor-vehicle-crashes-in-new-zealand-2012>

<sup>23</sup> Committee on the Medical effects of air pollutants. *Cardiovascular disease and Air Pollution*. London: Department of Health.: The Stationary Office. 2006.

<sup>24</sup> Stansfeld SA, Matheson MP. Noise pollution: non-auditory effects on health. *Br Med Bull* 2003;68:243-57.

<sup>25</sup> Ising H, Dienel D, Guenther T, et al. Health effects of traffic noise. *Int Arch Occup Environ Health* 1980;47:179-90.

<sup>26</sup> Evans GW, Lercher P, Meis M, et al. Community noise exposure and stress in children. *J Acoust Soc Am* 2001;109(3):1023-7.

<sup>27</sup> Leydeon KM. Social capital and the built environment: the importance of Walkable neighborhoods. *Am J Pub Health* 2003;93(9):1546-51.

<sup>28</sup> Berkman L, Syme SL. Social networks, host resistance, and mortality: A nine-year follow-up study of Alameda County residents. *Am J Epidemiol* 1979;109:186-204.

- Health inequalities<sup>30</sup>.
- Impacts on land availability (an estimated 24% of inner city land in some urban areas in New Zealand)<sup>31</sup>.
- Impacts on development costs for residential developments with mandatory associated car parking (these can cost up to \$40,000 per car park excluding land cost<sup>32</sup>).
- Storm water run-off and environmental pollution associated with car parking and vehicle use<sup>33, 34</sup>.
- Heavy metal contamination can occur from storm water run-off, and small concentrations of heavy metals can greatly influence water ecology and water health<sup>35</sup>.
- Petrol and diesel are hazardous substances; both carcinogenic and explosive<sup>36</sup>.
- Car dependence can also indirectly exclude some members of society from this mode of transport, the elderly, some disabled people, the young for instance.
- Car usage is also more expensive for households than public transport usage. Household costs can contribute to the overall poverty level and associated poverty related illnesses.

### **Positive aspects of car usage**

Some positive aspects of car usage include:

- Access to transportation for disabled people<sup>37</sup>. Parking for disabled people is an important provision, and needs to be informed by up to date and on going data as well as supported by other design features that enable disabled access.
- Emergency access and access for service vehicles.
- Provides access to hard to reach remote locations

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<sup>29</sup>It is estimated that by 2000 150 000 people were dying each year because of climate change. McMichael AJ, Campbell-Lendrum DH, Corvalán CF, et al. Climate Change and Human Health: Risks and Responses. Geneva: World Health Organization; 2003. <http://www.who.int/globalchange/publications/cchhsummary/en/>

<sup>30</sup> People living close to motorways may experience 50% higher levels of air pollutants concentration than those living further from motorways . Source: Pattinson, W.; Zavar-Reza, P.; Longley, I.; Kingham, S (date unknown) Near Motorway Air Quality at Two residential suburbs of South Auckland.

<sup>31</sup> Hulme-Moir, A. (2010). Making Way for the Car: Minimum Parking Requirements and Porirua City Centre. Accessed from: <http://researcharchive.vuw.ac.nz/handle/10063/1458> Page 50. Page 15.

<sup>32</sup> Hulme-Moir, A. (2010). Making Way for the Car: Minimum Parking Requirements and Porirua City Centre. Accessed from: <http://researcharchive.vuw.ac.nz/handle/10063/1458> Page 10.

<sup>33</sup> Previous consultation with manawhenua representatives in the Auckland Region has highlighted concern associated with the run off from roads travelling through storm water and polluting waterways. Polluted waterways directly impact on kai moana gathering and kai moana stocks and also impact negatively on recreational and spiritual use of waters for bathing. Impervious surfaces such as roofs and roads reduce the volume of water absorbed into ground or evaporated and therefore increase the volume of run off associated with rainfall. Pollutant concentrations of heavy metals from road run off are heavily influenced by the traffic density on roads.

<sup>34</sup> Walsh, C. J., Fletcher, T. D., & Burns, M. J. (2012). Urban stormwater runoff: a new class of environmental flow problem. PloS one, 7(9), e45814.

<sup>35</sup> Göbel, P., Dierkes, C., & Coldewey, W. G. (2007). Storm water runoff concentration matrix for urban areas. Journal of contaminant hydrology, 91(1), 26-42.

<sup>36</sup> Employees at petrol stations can be at risk of disease such as lymphoma as a result of repeated exposure to petrol fumes when working in petrol service stations.

<sup>37</sup> Although it should also be noted that this does not encompass all disabilities and that the cost of accessing this form of transportation is not available to all disabled people.



### ***Safety considerations and overall health impact of increased active transportation***

Although cycling is sometimes assumed to be unsafe, the overall savings of lives through reduced car dependency can actually lead to an overall reduction in deaths overall<sup>38</sup>.

Changes to promote mode choice to walking and cycling should be viewed in light of the improvements to health created by even modest gains in walking and cycling in the Auckland region. For example, a 2011 New Zealand study found that by shifting only 5% of vehicle kilometres to cycling it would result in the following<sup>39</sup>:

- **116 deaths avoided annually** as a result of increased physical activity, six fewer deaths due to local air pollution from vehicle emissions, and an additional five cyclist fatalities from road crashes.
- A 5% shift in net savings of about \$200 million per year through the health effects of including only fatalities and using the NZ Ministry of Transport Value of a Statistical Life.
- Reduce vehicle travel by approximately 223 million kilometres each year.
- Save about 22 million litres of fuel.
- Reduce transport-related greenhouse emissions by 0.4%.

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<sup>38</sup> Lindsay, G., Macmillan, A., & Woodward, A. (2011). Moving urban trips from cars to bicycles: impact on health and emissions. *Australian and New Zealand Journal of Public Health*, 35(1), 54-60.

<sup>39</sup> Ibid

